

# PATENT SPECIFICATION

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365,603

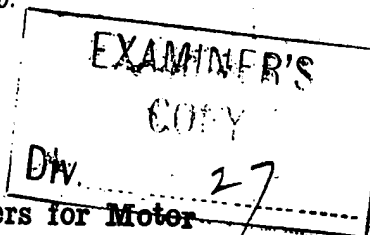
Application Date : Oct. 22, 1930. No. 31,707 / 30.

Complete Left : July 14, 1931

Complete Accepted : Jan. 22, 1932.

PROVISIONAL SPECIFICATION.

## Improvements relating to Wind Screen Wipers for Motor Vehicles.



We, JOSEPH LUCAS LIMITED, a Company duly incorporated under the Laws of Great Britain, of Great King Street, in the City of Birmingham, and OLIVER LUCAS, a British Subject, of the Company's address, do hereby declare the nature of this invention to be as follows:—

This invention relates to the wind screen wipers used on motor vehicles and has for its object to provide an improved construction which allows the wiper arm to be mounted on the movable screen and the actuating motor on a fixed part adjacent to the screen.

The invention comprises the combination of a pair of spindles and a coupling permitting automatic inter-engagement or disengagement of the spindles when the screen is closed or opened, one of the spindles being arranged in conjunction with the driving mechanism and the other in conjunction with the wiper arm.

In one manner of applying the invention to an electrically operated wiper situated at the lower edge of the front screen of a motor vehicle, we mount the driving mechanism (which consists in part of an electric motor) on the inner side of a fixed part of the vehicle. This mechanism may be concealed by a fixed garnish rail. The wiper arm, situated on the outer side of the screen, is carried by a spindle which is supported by a bearing on the screen. When the screen

is closed the wiper arm spindle is in line with the driving spindle associated with the driving mechanism and the two adjacent ends of the spindles are inter-engaged by a coupling. This may consist of a sleeve secured to or formed on the one spindle, and adapted to engage a splined or fluted end of the other spindle. any other convenient form of coupling may, however, be used. If desired one of the coupling members may be arranged in combination with a spring which can yield in the event of the members not properly engaging and which effects proper engagement when the coupling members are properly correlated.

When the screen is closed the driving mechanism is in active engagement with the wiper arm, but when the screen is open the arm is separated from the driving mechanism.

By this invention we are able to effect a mounting of the wiper on the vehicle in a manner which is more convenient and desirable for some purposes than is afforded by the constructions ordinarily used.

The invention is not limited to the example above described and subordinate details can be varied to suit different requirements.

Dated this 21st day of October, 1930.

MARKS & CLERK.

## COMPLETE SPECIFICATION.

### Improvements relating to Wind Screen Wipers for Motor Vehicles.

We, JOSEPH LUCAS LIMITED, a Company duly incorporated under the Laws of Great Britain, of Great King Street, in the City of Birmingham, and OLIVER LUCAS, a British Subject, of the Company's address, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to the wind screen

[Price 1/-]

wipers used on motor vehicles and has for its object to provide an improved construction which allows the wiper arm to be mounted on the movable screen and the actuating motor on a fixed part adjacent to the screen.

The invention comprises the combination of a pair of spindles and a coupling permitting automatic inter-engagement or disengagement of the spindles when the screen is closed or opened, one of the

spindles being arranged in conjunction with the driving mechanism and the other in conjunction with the wiper arm.

In the accompanying sheet of explanatory drawings:—

Figures 1 and 2 are sectional elevations illustrating two methods of carrying the invention into effect.

In applying the invention to an electrically operated wiper situated at the lower edge of the front screen of a motor vehicle, we mount the driving mechanism (which consists in part of an electric motor *a*) on the inner side of a fixed part *b* of the vehicle. This mechanism may be concealed by a fixed garnish rail. The wiper arm *l*, situated on the outer side of the screen *c*, is carried by a spindle *d* which is supported by a bearing *e* on the screen. When the screen is closed (as shown by full lines) the wiper arm spindle *d* is in line with the driving spindle *f* associated with the driving mechanism and the two adjacent ends of the spindles are interengaged by a coupling. This may consist of a slotted part *g* on the spindle *d* engageable with a tongue *h* on the driving spindle *f*, as shown in Figure 1. Or it may consist of a hollow and internally splined part *i* on the spindle *d* engageable with an externally splined part *j* on the spindle *f*, as shown in Figure 2. Alternatively, any other convenient form of coupling may be used. If desired one of the coupling members of the spindle *f* may be arranged in combination with a spring *k* so as to yield in the event of the members not properly engaging when the screen is closed. The spring effects proper engagement of the coupling mem-

bers when they are rotated into proper correlation.

When the screen is closed the driving mechanism is in active engagement with the wiper arm, but when the screen is open (as shown by dotted lines in Figure 1) the arm is separated from the driving mechanism.

By this invention we are able to effect a mounting of the wiper on the vehicle in a manner which is more convenient and desirable for some purpose than is afforded by the constructions ordinarily used.

The invention is not limited to the example above described and subordinate details can be varied to suit different requirements.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. In wind screen wipers for motor vehicles, the combination of a pair of spindles and a coupling permitting automatic interengagement or disengagement of the spindles when the screen is closed or opened, one of the spindles being arranged in conjunction with the driving mechanism and the other in conjunction with the wiper arm, substantially as described.

2. In wind screen wipers for motor vehicles, means for effecting a detachable connection between the wiper arm and the driving spindle, substantially as described and illustrated.

Dated this 9th day of July, 1931.  
MARKS & CLERK.

BRITISH

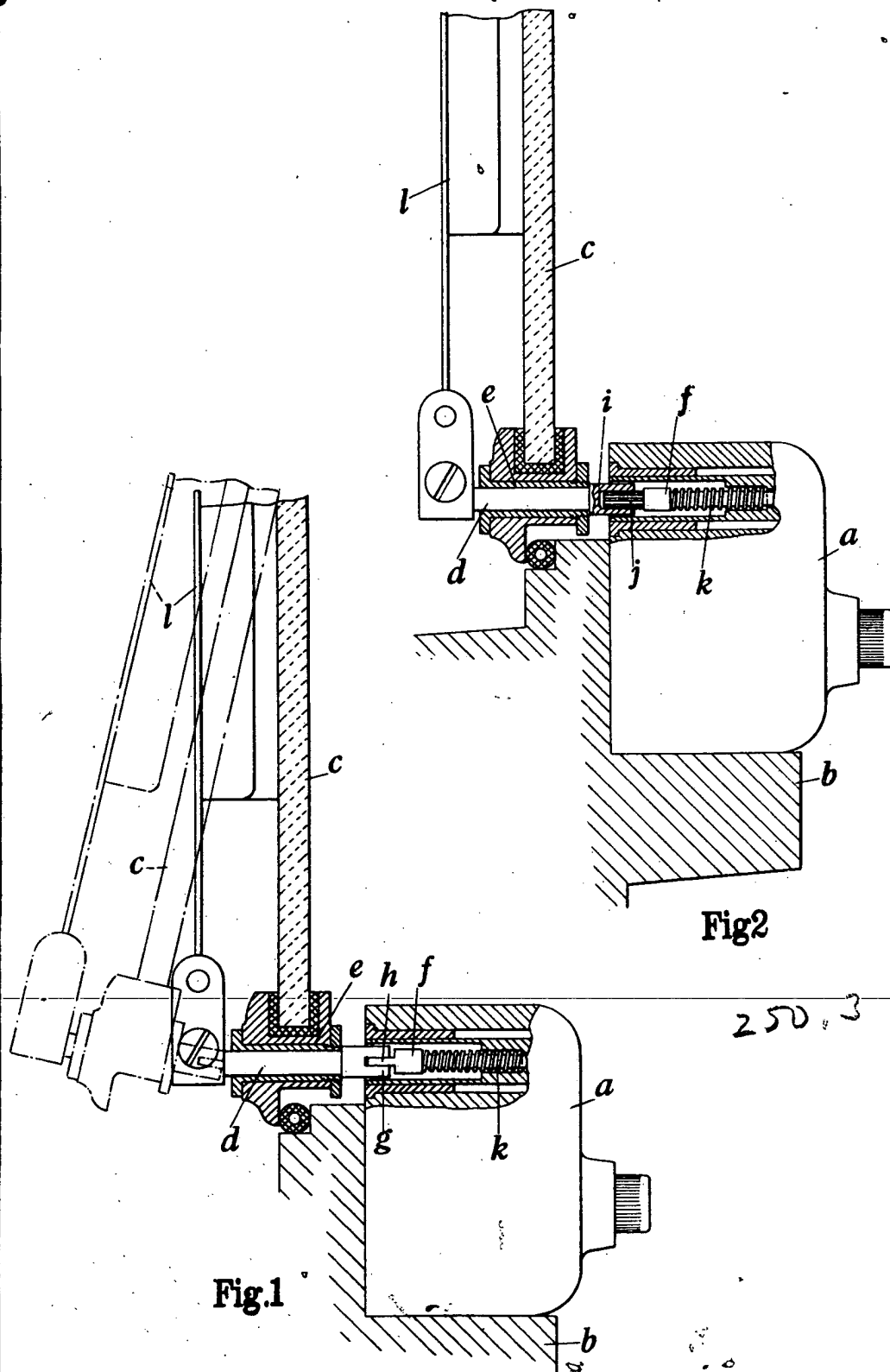
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365,603 COMPLETE SPECIFICATION

1 SHEET

LISTED

[This Drawing is a reproduction of the Original on a reduced scale.]



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